IN THE CLAIMS

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application. Where claims have been amended and/or canceled, such amendments and/or cancellations are done without prejudice and/or waiver and/or disclaimer to the claimed and/or disclosed subject matter, and the applicant and/or assignee reserves the right to claim this subject matter and/or other disclosed subject matter in a continuing application.

Listing of Claims:

What is claimed is:

1. (Currently Amended) The compensation apparatus according to claim 16, ~~A compensation apparatus comprising:~~

wherein said one or more ~~a set of~~ calibration boards [[,]] comprises ~~comprising~~ two calibration boards approximately located at two sides of [[a]] said platform; and

[[a]] wherein said set of calibration photosensitive devices[[,]] are approximately located at two sides of [[a]] said set of scan photosensitive devices~~, said set of calibration photosensitive devices capable of obtaining a set of calibrated images by detecting the calibration boards; and~~

~~an image processor, capable of calculating an optical path deviation based at least in part on the calibrated images to adjust the scanned image~~.

2. (Previously Presented) The compensation apparatus according to claim 1, wherein the set of calibration photosensitive devices comprises a plurality of calibration photosensitive devices arranged in a LxK array at two sides of the set of scan photosensitive devices, and wherein L and K are integers larger than 1.

3. (Previously Presented) The compensation apparatus according to claim 2, wherein the set of scan photosensitive devices comprises a plurality of scan photosensitive devices, and

wherein the calibration photosensitive devices have a dimension smaller than that of the scan photosensitive devices.

4. (Cancelled)

5. (Currently Amended) The compensation apparatus according to claim 18 [[4]], wherein the one or more calibration boards have a trapezium shape.

6. (Currently Amended) The compensation apparatus according to claim 18 [[4]], wherein the one or more calibration boards have a triangle shape.

7. (Currently Amended) The compensation apparatus according to claim 18 [[4]], wherein the one or more calibration boards have curved perimeters.

8. (Cancelled)

9. (Currently Amended) The compensation apparatus according to claim 19 [[8]], wherein the one or more calibration boards have a trapezium shape.

10. (Currently Amended) The compensation apparatus according to claim 19 [[8]], wherein the one or more calibration boards have a triangle shape.

11. (Currently Amended) The compensation apparatus according to claim 19 [[8]], wherein the one or more calibration boards have curved perimeters.

12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

15. (Cancelled)

16. (Currently Amended) ~~The compensation apparatus according to claim 15,~~

A compensation apparatus comprising:

one or more calibration boards, approximately located at one side of a platform;

a set of calibration photosensitive devices, approximately located at one side of a set of scan photosensitive devices, capable of obtaining a calibrated image by detecting the one or more calibration boards;

an image processor, capable of calculating an optical path deviation based at least in part on the calibrated image to adjust the scanned image; and

wherein the set of calibration photosensitive devices comprises a plurality of calibration photosensitive devices arranged at two sides of the set of scan photosensitive devices in an LxK array, wherein L and K are integers larger than 1.

17. (Currently Amended) ~~The compensation apparatus according to claim 15,~~

A compensation apparatus comprising:

one or more calibration boards, approximately located at one side of a platform;

a set of calibration photosensitive devices, approximately located at one side of a set of scan photosensitive devices, capable of obtaining a calibrated image by detecting the one or more calibration boards;

an image processor, capable of calculating an optical path deviation based at least in part on the calibrated image to adjust the scanned image; and

wherein the set of scan photosensitive devices comprise a plurality of scan photosensitive devices, and wherein the calibration photosensitive devices have a dimension smaller than that of the scan photosensitive devices.

18. (Currently Amended) ~~The compensation apparatus according to claim 15,~~

A compensation apparatus comprising:

one or more calibration boards, approximately located at one side of a platform;

a set of calibration photosensitive devices, approximately located at one side of a set of scan photosensitive devices, capable of obtaining a calibrated image by detecting the one or more calibration boards;

an image processor, capable of calculating an optical path deviation based at least in part on the calibrated image to adjust the scanned image; and

wherein the one or more calibration boards have a strip shape and a width increasing along a scanning direction.

19. (Currently Amended) ~~The compensation apparatus according to claim 15,~~

A compensation apparatus comprising:

one or more calibration boards, approximately located at one side of a platform;

a set of calibration photosensitive devices, approximately located at one side of a set of scan photosensitive devices, capable of obtaining a calibrated image by detecting the one or more calibration boards;

an image processor, capable of calculating an optical path deviation based at least in part on the calibrated image to adjust the scanned image; and

wherein the one or more calibration boards have a strip shape and a width decreasing along a scanning direction.

20. (Cancelled)

21. (Currently Amended) ~~The compensation apparatus according to claim 15,~~

A compensation apparatus comprising:

one or more calibration boards, approximately located at one side of a platform;

a set of calibration photosensitive devices, approximately located at one side of a set of scan photosensitive devices, capable of obtaining a calibrated image by detecting the one or more calibration boards;

an image processor, capable of calculating an optical path deviation based at least in part on the calibrated image to adjust the scanned image; and

wherein the image processor is further capable of:

calculating the optical path deviation in an x-axis according to a displacement of the calibrated image detected by the set of calibration photosensitive devices;

calculating the optical path deviation in a y-axis according to the displacement of the calibrated image detected by the set of calibration photosensitive devices; and

calculating the optical path deviation in a z-axis according to the displacement of the calibrated image detected by the set of calibration photosensitive devices.

22. (Previously Presented) The compensation apparatus according to claim 21, wherein the image processor is further capable of:

calculating the optical path deviation twisting around the y-axis according to the optical path deviation in the z-axis; and

calculating the optical path deviation twisting around the z-axis according to the optical path deviation in the y-axis.

23. (Cancelled)

24. (Cancelled)

25. (Currently Amended) ~~The method of claim 23, further comprising:~~

A method, comprising:

obtaining a calibrated image by detecting a calibration board approximately located at one side of a platform of a scanner with a set of calibration photosensitive devices;

calculating an optical path deviation based at least in part on the calibrated image to adjust the scanned image;

calculating the optical path deviation in an x-axis according to a displacement of the calibrated image detected by the set of calibration photosensitive devices;

calculating the optical path deviation in a y-axis according to the displacement of the calibrated image detected by the set of calibration photosensitive devices; and

calculating the optical path deviation in a z-axis according to the displacement of the calibrated image detected by the set of calibration photosensitive devices.

26. (Previously Presented) The method of claim 25, further comprising:

calculating the optical path deviation twisting around the y-axis according to the optical path deviation in the z-axis; and

calculating the optical path deviation twisting around the z-axis according to the optical path deviation in the y-axis.

27. (Cancelled)

28. (Cancelled)

29. (Currently Amended) ~~The apparatus of claim 27, further comprising:~~

An apparatus, comprising:

means for obtaining a calibrated image by detecting a calibration board approximately located at one side of a platform of a scanner with a set of calibration photosensitive devices;

means for calculating an optical path deviation based at least in part on the calibrated image to adjust the scanned image;

means for calculating the optical path deviation in an x-axis according to a displacement of the calibrated image detected by the set of calibration photosensitive devices;

means for calculating the optical path deviation in a y-axis according to the displacement of the calibrated image detected by the set of calibration photosensitive devices; and

means for calculating the optical path deviation in a z-axis according to the displacement of the calibrated image detected by the set of calibration photosensitive devices.

30. (Previously Presented) The apparatus of claim 29, further comprising:

means for calculating the optical path deviation twisting around the y-axis according to the optical path deviation in the z-axis; and

means for calculating the optical path deviation twisting around the z-axis according to the optical path deviation in the y-axis.

31. (New) A compensation apparatus comprising:

a set of calibration boards, comprising two calibration boards approximately located at two sides of a platform;

a set of calibration photosensitive devices, approximately located at two sides of a set of scan photosensitive devices, said set of calibration photosensitive devices capable of obtaining a set of calibrated images by detecting the calibration boards; and

an image processor, capable of calculating an optical path deviation based at least in part on the calibrated images to adjust the scanned image, and wherein the image processor is capable of extracting and comparing the calibrated images to calculate said optical path deviation magnitude and direction based at least in part on a pattern proportion and a displacement of the calibrated images of the calibration boards detected by the set of calibration photosensitive devices.

32. (New) The compensation apparatus according to claim 31, wherein the set of calibration photosensitive devices comprises a plurality of calibration photosensitive devices arranged in a LxK array at two sides of the set of scan photosensitive devices, and wherein L and K are integers larger than 1.

33. (New) The compensation apparatus according to claim 32, wherein the set of scan photosensitive devices comprises a plurality of scan photosensitive devices, and wherein the calibration photosensitive devices have a dimension smaller than that of the scan photosensitive devices.

34. (New) The compensation apparatus according to claim 31, wherein the calibration boards have a strip shape and a width increasing along a scanning direction.

35. (New) The compensation apparatus according to claim 31, wherein the calibration boards have widths decreasing along a scanning direction.

36. (New) The compensation apparatus according to claim 31, wherein the image processor is further capable of:

calculating the optical path deviation in an x-axis according to a displacement of the calibrated images detected by the set of calibration photosensitive devices;

calculating the optical path deviation in a y-axis according to the displacement of the calibrated images detected by the set of calibration photosensitive devices; and

calculating the optical path deviation in a z-axis according to the displacement of the calibrated images detected by the set of calibration photosensitive devices.

37. (New) The compensation apparatus according to claim 36, wherein the image processor is further capable of:

calculating the optical path deviation twisting around the y-axis according to the optical path deviation in the z-axis; and

calculating the optical path deviation twisting around the z-axis according to the optical path deviation in the y-axis.

38. (New) A compensation apparatus comprising:

a calibration board, approximately located at one side of a platform;

a set of calibration photosensitive devices, approximately located at one side of a set of scan photosensitive devices, capable of obtaining a calibrated image by detecting the calibration board; and

an image processor, capable of calculating an optical path deviation based at least in part on the calibrated image to adjust the scanned image, and wherein the image processor is capable of extracting and comparing the calibrated image to calculate said optical path deviation magnitude and direction based at least in part on a pattern proportion and a displacement of the calibrated image of the calibration boards detected by the set of calibration photosensitive devices.

39. (New) The compensation apparatus according to claim 38, wherein the set of calibration photosensitive devices comprises a plurality of calibration photosensitive devices arranged at two sides of the set of scan photosensitive devices in an LxK array, wherein L and K are integers larger than 1.

40. (New) The compensation apparatus according to claim 38, wherein the set of scan photosensitive devices comprise a plurality of scan photosensitive devices, and wherein the calibration photosensitive devices have a dimension smaller than that of the scan photosensitive devices.

41. (New) The compensation apparatus according to claim 38, wherein the calibration boards have a strip shape and a width increasing along a scanning direction.

42. (New) The compensation apparatus according to claim 38, wherein the calibration boards have a strip shape and a width decreasing along a scanning direction.

43. (New) The compensation apparatus according to claim 38, wherein the image processor is further capable of:

calculating the optical path deviation in an x-axis according to a displacement of the calibrated image detected by the set of calibration photosensitive devices;

calculating the optical path deviation in a y-axis according to the displacement of the calibrated image detected by the set of calibration photosensitive devices; and

calculating the optical path deviation in a z-axis according to the displacement of the calibrated image detected by the set of calibration photosensitive devices.

44. (New) The compensation apparatus according to claim 43, wherein the image processor is further capable of:

calculating the optical path deviation twisting around the y-axis according to the optical path deviation in the z-axis; and

calculating the optical path deviation twisting around the z-axis according to the optical path deviation in the y-axis.

45. (New) A method, comprising:

obtaining a calibrated image by detecting a calibration board approximately located at one side of a platform of a scanner with a set of calibration photosensitive devices; and

calculating an optical path deviation based at least in part on the calibrated image to adjust the scanned image, said calculating comprising extracting and comparing the calibrated image to calculate said optical path deviation magnitude and direction based at least in part on a pattern proportion and a displacement of the calibrated image of the calibration board detected by the set of calibration photosensitive devices.

46. (New) The method of claim 45, further comprising:

calculating the optical path deviation in an x-axis according to a displacement of the calibrated image detected by the set of calibration photosensitive devices;

calculating the optical path deviation in a y-axis according to the displacement of the calibrated image detected by the set of calibration photosensitive devices; and

calculating the optical path deviation in a z-axis according to the displacement of the calibrated image detected by the set of calibration photosensitive devices.

47. (New) The method of claim 46, further comprising:

calculating the optical path deviation twisting around the y-axis according to the optical path deviation in the z-axis; and

calculating the optical path deviation twisting around the z-axis according to the optical path deviation in the y-axis.

48. (New) An apparatus, comprising:

means for obtaining a calibrated image by detecting a calibration board approximately located at one side of a platform of a scanner with a set of calibration photosensitive devices; and

means for calculating an optical path deviation based at least in part on the calibrated image to adjust the scanned image, said means for calculating comprising means for extracting and comparing the calibrated image to calculate said optical path deviation magnitude and direction based at least in part on a pattern proportion and a displacement of the calibrated image of the calibration board detected by the set of calibration photosensitive devices.

49. (New) The apparatus of claim 48, further comprising:

means for calculating the optical path deviation in an x-axis according to a displacement of the calibrated image detected by the set of calibration photosensitive devices;

means for calculating the optical path deviation in a y-axis according to the displacement of the calibrated image detected by the set of calibration photosensitive devices; and

means for calculating the optical path deviation in a z-axis according to the displacement of the calibrated image detected by the set of calibration photosensitive devices.

50. (New) The apparatus of claim 49, further comprising:

means for calculating the optical path deviation twisting around the y-axis according to the optical path deviation in the z-axis; and

means for calculating the optical path deviation twisting around the z-axis according to the optical path deviation in the y-axis.